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RISK OF NEW-ONSET DIABETES FROM STATIN THERAPY INCREASES WITH INCREASING BASELINE TRIGLYCERIDES: DATA FROM TNT

Poster Contributions
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Background: In randomized statin trials, fasting triglycerides (TG) have been identified as a predictor of new-onset diabetes (NOD). We sought to further characterize this relationship in patients from TNT.

Methods: We included patients from the TNT study, which randomized 10,001 patients with coronary disease to atorvastatin 80 mg or 10 mg/day and followed them for a median of 4.9 years. Patients with DM at baseline (n=1,771) or missing TG or fasting blood glucose (FBG) measurements (n=639) were excluded. Fasting TG were analyzed as >150 mg/dL vs. ≤150 mg/dL and divided into quintiles. Cox proportional hazards models were used to assess impact of TG on NOD event rates both as univariate models and adjusting for baseline FBG, BMI, HDL, and hypertension.

Results: The incidence of NOD was 8.7% overall. Median TG level was 131 mg/dL (IQR 99-176 mg/dL); 37% of subjects (n=2792) had baseline TG>150 mg/dL. There was a significant increase in risk for NOD in those with TG>150 mg/dL vs. those with TG≤150 mg/dL (HR 2.03, 95% CI 1.75-2.37), which persisted after multivariable adjustment (HR 1.47, 95% CI 1.25-1.73, p<0.0001). Risk increased from quintile 2 (adj. HR 1.23, 95% CI 0.90-1.68) to quintile 5 (adj. HR 1.93, 95% CI 1.44-2.57) (Figure). Twice as many patients with baseline TG>150 mg/dL went on to develop NOD compared to those with TG≤150 mg/dL.

Conclusion: In this post-hoc analysis of a large statin trial, the incidence of NOD was significantly higher with higher fasting TG at baseline, independent of other NOD risk factors.